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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,292	05/20/2004	Alan L. Ferguson	8350.3410-00000	5590
58982 7590 04/07/2008 CATERPILLAR/FINNEGAN, HENDERSON, L.L.P. 901 New York Avenue, NW WASHINGTON, DC 20001-4413				
EXAMINER				
WOOD, WILLIAM H				
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2193				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/849,292

Applicant(s)

FERGUSON ET AL.

Examiner

William H. Wood

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2193

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-12, 14-29 and 31-37 is/are rejected.
- 7) ☐ Claim(s) 10, 13 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 5/20/04

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-37 are pending and have been examined.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 5/20/04 has been considered by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 36 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 36 recites the limitation "the target machine" in the last limitation. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction may include "the target module" (the claim has been interpreted as such).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole

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would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 11-12, 14-29 and 31-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kacel** (US 6,687,587 B2) in view of **Zhou** et al. (US 7,284,236 B2).

Claim 1

Kacel discloses a method for wirelessly (*column 5, lines 20-28*) providing software updates to a target module located in a work machine, comprising:

- determining whether a software update condition exists for software stored in the target module (*figure 5; column 12, lines 23-30, "update software"*);
- delivering software update data from a remote off-board system to the work machine when a software update condition exists (*figure 5; column 12, lines 40-53, "telematics module may receive data"*); and
- performing an update process by the work machine including:
 - determining, at the work machine, a location of the target module (*figure , elements 130, 132, 134; figure 5; column 13, lines 1-17*)

Kacel did not explicitly state determining the existence of a delay condition and updating if no delay condition while not updating if there is a delay condition.

Zhou demonstrated that it was known at the time of invention to delay updates based upon delay conditions (column 9, lines 3-10). It would have been

obvious to one of ordinary skill in the art at the time of invention to implement the vehicle component update system of **Kacel** with component update delay as found in **Zhou**'s teaching. This implementation would have been obvious because one of ordinary skill in the art would be motivated to delay further delivery of updates until the system is sure of reliability (column 8, line 1 to column 9, line 3).

Claim 2

Kacel and **Zhou** disclose the method of claim 1, wherein determining the location

of the target module includes:

determining whether the target module is located on a primary data link or a secondary data link (**Kacel**: figure 1, elements 130, 132, 134, the connections provided).

Claim 3

Kacel and **Zhou** disclose the method of claim 2, wherein when the target module is located on the primary data link, delivering, without delay, the software update to the target module (**Kacel**: figure 5).

Claim 4

Kacel and **Zhou** disclose the method of claim 2, wherein when the target module is located on the secondary data link, delivering the software update to the target module only if there is no update delay condition (*as above under claim 1*).

Claim 5

Kacel and **Zhou** disclose the method of claim 2, wherein when the target module is located on the primary data link, delivering, without delay, the software update to the target module only if there is no update delay condition (*as above under claim 1*).

Claim 6

Kacel and **Zhou** disclose the method of claim 1, wherein an update delay condition includes at least one of:

- (i) a condition where the target module is incapable of receiving the software update at that time (*as above under claim 1*);
- (ii) a condition where an interface control system that manages distribution of the software update within the work machine is incapable of delivering the software update at that time; and
- (iii) a condition where the target module is located on a secondary data link that has transmission characteristics different than those of a primary data link connected to the interface control system.

Claim 7

Kacel and **Zhou** disclose the method of claim 1, wherein delivering the software update to the target module if no update delay condition exists includes:

receiving the software update at an interface control system within the work machine that manages the delivery of software updates for the work machine (**Kacel**: figures 1 and 5, telematics module); and

forwarding, by the interface control system and without delay, the software update to the target module (**Kacel**: figures 1 and 5).

Claim 8

Kacel and **Zhou** disclose the method of claim 1, wherein delaying the delivery of the software update data includes:

receiving the software update at an interface control system within the work machine that manages the delivery of software updates for the work machine (**Kacel**: figure 1, telematics module);

storing the software update data in a memory device associated with the interface control system (**Kacel**: figure 1, telematics module); and

monitoring the update delay condition to determine when to deliver the software update data to the target module (**Kacel**: column 10, lines 16-32).

Claim 9

Kacel and **Zhou** disclose the method of claim 1, wherein determining whether an update delay condition exists includes:

receiving an indication from the target module reflecting a condition that it cannot process software updates at the time of receiving the indication (**Zhou**: column 8, line 1 to column 9, line 3, receiving or not receiving acknowledgement).

Claim 11

Kacel and **Zhou** did not explicitly state method of claim 1, wherein determining whether a software update condition exists for software stored in the target module includes: determining whether the target module is in need of a different version of software based on an identification of software that is currently stored in the target module. **Official Notice** is taken that it was known at the time of invention to determine need of update based upon currently installed version of software. It would have been obvious to one of ordinary skill in the art at the time of invention to implement the update system of **Kacel** and **Zhou** with determining need of update based upon currently installed software. This implementation would have been obvious because one of ordinary skill in the art would be motivated to engage in the cost of updating when necessary.

Claim 12

Kacel and **Zhou** did not explicitly state method of claim 1, further including: notifying a user associated with the work machine that the software update condition exists; and receiving an indication from the user regarding the notification. **Official Notice** is taken that it was known at the time of invention to notify a user about updates and receive their input. It would have been obvious to one of ordinary skill in the art at the time of invention to implement the update system of **Kacel** and **Zhou** with user input regarding updates. This implementation would have been obvious because one of ordinary skill in the art would be motivated to provided an administrator/client control ensuring proper functioning of a system.

Claim 14

Kacel and **Zhou** disclose the method of claim 1, wherein performing an update process includes:

providing a notification message from the target module indicating a status of the delivery of the software update to the target module (**Zhou**: column 8, line 1 to column 9, line 3, receiving or not receiving acknowledgement).

Claim 15

Kacel and **Zhou** disclose the method of claim 14, wherein the status of the delivery of the software update reflects one of a successful write of the software update to the target module, and an unsuccessful write of the software update

to the target module (**Zhou**: column 8, line 1 to column 9, line 3, receiving or not receiving acknowledgement).

Claim 16

Kacel and **Zhou** did not explicitly state the method of claim 15, wherein when the notification message indicates an unsuccessful write of the software update, the notification message includes data reflecting a reason associated with the unsuccessful write of the software update. **Official Notice** is taken that it was known at the time of invention to include reasons associated with failure or unsuccessful behavior. It would have been obvious to one of ordinary skill in the art at the time of invention to implement the messaging system of **Kacel** and **Zhou** with reasons for failure. This implementation would have been obvious because one of ordinary skill in the art would be motivated to provided a record/log/mechanism for debugging or troubleshooting errors in a system.

Claims 17-29 and 31-33

The limitations of claim 17-29 and 31-33 correspond to the limitations of claims 1-9, 11-12 and 14-16 and as such the claims are rejected in a corresponding manner.

Claim 34

The limitations of claim 34 correspond to the limitations of claim 1 and as such the claims are rejected in a corresponding manner. **Kacel** and **Zhou** did not explicitly state relaying update to a first work machine within range and from their to a second work machine outside of the range. **Official Notice** is taken that it was known at the time of invention to relay information from node to node within a network, where some nodes are not within range of the originating source. It would have been obvious to one of ordinary skill in the art at the time of invention to implement update system of **Kacel** and **Zhou** with node data relay. This implementation would have been obvious because one of ordinary skill in the art would be motivated to make updates available to the largest area of need possible.

Claims 35-37

The limitations of claims 35-37 correspond to the limitations of claim 1 and as such the claims are rejected in a corresponding manner.

Allowable Subject Matter

Claims 10, 13 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Wood whose telephone number is (571)-272-3736. The examiner can normally be reached 10:00am - 4:00pm Tuesday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis A. Bullock Jr. can be reached on (571)-272-3759. The fax phone numbers for the organization where this application or proceeding is assigned are (571)273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR systems, see <http://pair-direct.uspto.gov>. For questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

/William H. Wood/
William H. Wood
Primary Examiner, Art Unit 2193
April 7, 2008